

Case Report

Postmortem sole incisions – A new sign of heroin overdose?

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Abstract

Postmortem sole incisions have been observed in a number of heroin overdose fatalities. Acquaintance of those victims confessed to producing those incisions as a life saving procedure in a futile attempt to help the comatose overdose victim. They thought that bleeding the unconscious victim would remove the overdose, in manner similar to bloodletting or phlebotomy which is still popular in the Gulf region.

The presence of such wounds has become a first indication or rather “sign” of heroin poisoning. In such cases, laboratory investigation confirmed the pathologist’s preliminary suspicion.

In Dubai, postmortem sole incisions are important sign of death from heroin overdose even in the absence of other classical signs. This sign becomes more credible when accompanied by other signs and/or circumstantial evidence suggestive of heroin use. It is suggested that this should be called “bloodletting sign” of death from heroin overdose.

The sign should not be confused with the self-inflicted cuts seen on the arms and forearms of drug misusers which are caused for other reasons.

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1. Introduction

In Dubai, during a time span of five years (2001–2005), the total number of deaths examined in the Department of Forensic Medicine of Dubai Police General Headquarters amounted to 3486 cases. That averaged 679.2 deaths per year. During the same time drug overdose fatalities had been 55 cases (1.6% of the total deaths examined).

Thirty five of those were attributed to intravenous heroin injection (64% of total drug overdose victims). There had been evidence of group drug abuse in 7 cases (20%). Of those, 6 cases (86%) showed postmortem sole incisions. Incisions were superficial and extending over soles of one or two feet, and sometimes on the planter surface of the big toes.

Such injuries, however, has not been reported in surviving blood addicts. They are not the same as self-inflicted incisions of arms (Fig. 1), forearms (Fig. 2), multiple tattoos (Fig. 3) and needle tracks which commonly seen in drug users, and which are produced for entirely different purposes.

2. Case report 1

A 25-year-old male, weighing 95 kg, died in his parents’ home. His brother reported the death to the police at 1.30 am on Saturday, 30th June 2001, and mentioned that the deceased had probably died of an overdose. An incised wound, 5 cm in length, was found in the sole of his right foot. A fresh needle prick mark was noted in his left cubital fossa. A sample of his blood was tested and found to contain 0.3 mg/l of morphine, 0.7 mg/l of codeine, 0.12 mg/l of diazepam and 0.88 mg/l of oxazepam.

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Fig. 1. Right arm of a drug addict showing old multiple self-inflicted longitudinal incisions on its lateral aspect.

3. Case report 2

A body of an unknown male, weighing 60 kg and 176 cm in height, was found dead in a public park at 6

am of 28th November 2001. The location and position of the body indicated that it was brought dead and dumped there. There were multiple incisions on the soles of both feet (Fig. 4) and a needle prick mark on his left cubital fossa of his left arm. A blood sample was tested and found to contain 0.6 mg/l of morphine, 0.3 mg/l of codeine, 0.3 mg/l of diazepam, 0.5 mg/l of bromazepam and 0.1 mg/l of oxazepam.

4. Case report 3

The body of an 18-year-old male was found in a friend's home in the evening of 4th December, 2002. His height was 180 cm and weighed 85 kg. Whitish froth was exuding from his mouth. There was fresh needle prick mark on the cubital fossa of his right arm and fresh incisions on the planter aspects of both toes (Fig. 5). There were also scars of old incisions on both forearms, and tattoo on the chest. A blood sample was tested and found to contain 6-monoacetyl morphine, and 56 mg/dl of ethanol.

5. Case report 4

The body of a 28-year-old male, weighing 85 kg, was found in a rubbish dumpster at 4.45 am on 10th April 2001. The police knew his identity from an identity card found inside one of his pockets. There fresh needle prick marks on both arms. There were multiple incised wounds on the palmer surface of the fingers of his right hand and on the sole of his left foot. A blood sample was tested and found to contain 0.15 mg/l of morphine, 0.11 mg/l of codeine, 0.4 mg/l of bromazepam, 0.25 mg/l of diazepam and 1.15 mg/l of oxazepam. It also contained 82 mg/dl of ethanol.



Fig. 2. Left forearm of a female drug addict showing multiple healed transverse self-inflicted incisions on the flexor aspect.



Fig. 3. Multiple tattoos and scars of old self-inflicted longitudinal incisions on the arm of a drug overdose victim.



Fig. 4. Bilateral multiple postmortem sole incisions on the feet of heroin overdose victim.

6. Case report 5

The body of a 29-year-old male, weighing 88 kg, was reported by his prison inmates to have died at 9 pm on Saturday, 1st December, 2001. A plume of froth was noted around his mouth, and a needle prick mark was noted on the back of his left hand, and a few incised wounds were noted on the planter aspect of the right big toe (Fig. 6). A blood sample was tested and found to contain 1.5 mg/l of morphine, 0.4 mg/l of codeine and 0.2 mg/l of oxazepam.

7. Case report 6

The body of an unknown male, weighing 95 kg, was found lying on a sandy ground on the outskirt of a residen-

tial area. The position of the body, and tire-marks on the sand indicated that he was carried in a car and brought and dumped there. A whitish plume of froth was exuding from his mouth. He was identified later to be a 26-year-old. A needle prick mark was noted on the back of his left hand, and tattoos on the left arm and right forearm. A deep incised wound was found on the web between the 5th and 4th toes of the left foot. A blood sample was chemically tested and found to contain 0.06 mg/l of morphine, 3 mg/l of codeine and 0.6 mg/l of diazepam.

8. Discussion

Postmortem sole incisions were observed in a number of heroin overdose fatalities. Interrogation and police



Fig. 5. Postmortem incisions on the planter aspect of both big toes of a drug overdose fatality.



Fig. 6. Right big toe of heroin overdose victim showing some postmortem incisions.

investigation revealed that surviving comrades of those victims produced the incisions in a futile attempt to revive them. They thought that bloodletting of the victim would remove the overdose. Bloodletting or phlebotomy was a popular medical practice from antiquity up to the 19th century, involving the withdrawal of considerable quantities of blood from a patient in the hopeful belief that this would cure or prevent a great many illnesses and diseases. This practice, almost abandoned in the western hemisphere, is still popular in the gulf region of the Arab world, where it is called Hijama. That was certainly the reason behind this unique practice by the drug addicts.

In many cases thereafter, the presence of such wounds became the first indication or rather “sign” of heroin poi-

soning. In such cases, laboratory investigation confirmed the preliminary suspicion.

In the presence of suitable circumstantial evidence including a needle prick mark (Fig. 7), postmortem sole incisions are one of the signs indicating death due to heroin overdose. As the intention of infliction such incisions was bloodletting, it is suggested it should be called: The Blood-letting Sign of death from Heroin Overdose.

This sign must not be confused with the self-inflicted cuts seen on the arms and forearms of surviving drug addicts. Enquiries from the addicts themselves revealed that the main purpose of those deliberate cuts was to manipulate their close relatives to concede for their unending demand of money. Moreover, some inmate addicts explained that



Fig. 7. A needle prick mark on the dorsum of the right hand of drug overdose fatality.

injuries justify their transfer to hospital care, where security is less, and the chances to obtain drugs is more.

9. Conclusions

Fresh sole incisions are unique and important addition to the previously described trademark signs of heroin and morphine addiction. In Dubai, the presence of these inju-

ries proved to be highly suggestive that death was due to heroin overdose even when other classical signs were absent. It makes it worthy of consideration amongst the postmortem signs of overdose fatalities, and it is proposed to call it: “Bloodletting sign”. Multiple tattoos, scars of old self-inflicted incisions on the arms, needle marks and to a lesser extent, needle tracks were also present in the studied sample.